from 29 per cent to 42 per cent, the mean temperature being 67°. Both of these degrees of humidity are much too low according to the results obtained from a study of pneumonia, operations, and deaths in general. Furthermore the children were subjected to the slightly humified air only about 24 hours per week, while during the other 144 they lived under the same conditions as did the children who were in the drier room. A difference of 1 or 2 per cent in health could scarcely be expected to be evident in mental achievement, especially in view of the fact that the gradings depended upon only a single examination. One child with a cold would be enough to upset the entire result.

The question of the practicability of humification is of great importance. In many places it is to-day impracticable to have the degree of humidity which would seem to be desirable. That, however, is no reason for giving up the attempt. If we need greater humidity within our houses for the sake of health, the thing to do is to devise new methods of obtaining it. Double windows, for example, make a great difference in this respect; so, too, do proper air spaces within walls. In conclusion, a word should be said about the physiological effect of going from a warm room with fairly high humidity to the cold outside air in winter. I, too, like Mr. Kincer, supposed at one time that this was injurious. In order to test the matter, however, I made inquiries among greenhouse men who, more than almost any others, are subject to such changes. To my surprise I was repeatedly met by the most positive statement that greenhouse men feel no ill effects from going from the warm, moist greenhouse air to the cold air outdoors, especially when the greenhouses are kept near the ideal temperature, say at 65°. This point, like many of those discussed here, opens another great field where our knowledge is slight and where much further study is needed.—*E. H.*

RELATIONS BETWEEN THE METEOROLOGICAL ELEMENTS AND THE NUMBER OF DEATHS FROM INFLAMMATORY DISEASES OF THE RESPIRATORY ORGANS, AT PARIS.

By LOUIS BESSON.

[Abstracted from *Comptes Rendus* (Paris Acad.), Oct. 11, 1920, pp. 686-688.]

Having drawn upon the *Bulletin hebdomadaire de statistique municipale* for figures regarding the number of deaths from diseases of the respiratory organs, the author has studied them in relation to the daily and weekly means of the principal meteorological elements as determined at the Montsouris Observatory. The diseases considered were acute bronchitis, chronic bronchitis, pneumonia, broncho-pneumonia, pulmonary congestion, and other affections of the respiratory apparatus, with the exception of phthisis. The record covers the 10 years 1904–1913, or 522 weeks.

Evaluating the population of Paris at 2,784,000 during the period in question, he finds that there was a weekly average of 142 deaths from these causes, but there is a marked annual variation. There is a maximum in the middle of February and a minimum at the beginning of September. There is a secondary maximum in the middle of April and a secondary minimum in the middle of March. There is a marked relation between the antepenultimate weekly mean of temperature and these deaths, the one curve being the inverse of the other. There is also a direct relation between the number of days of the week preceding the death upon which there were winds from the NNE. to E. and the deaths. Considering these two factors of temperature and wind direction, it is possible to eliminate their effects and determine a seasonal curve. When this is done, it is found that the first six months of the year have more deaths than the last, and that November is the most favorable, whereas January and April are the most unfavorable.

Humidity is only a secondary factor to these three, because it is dependent upon the direction of the wind. NNE. to E. winds are dry winds, and since there is an increase in the number of deaths following these winds, it may be said that the dry air is not favorable, a fact which does not justify the good reputation, as the author says, of the *petit froid sec.*[1]

The details of the study, of which this note is a summary, will be published later elsewhere.—*C. L. M.*

COLDS AND THEIR RELATION TO THE PHYSICS OF THE ATMOSPHERE.

By C. M. RICHTER, M. D.

[Author's conclusions reprinted from the *Medical Record*, New York, Dec. 6, 1913.

1. Acute coryza, commonly called a "cold," depends for its development primarily on an excess of moisture in the air we inhale.

2. It develops, therefore, principally during the cyclonic weather condition called a LOW, especially when a period of very dry weather has preceded a LOW and when, in consequence, the change from previous dry air to the incoming very moist air is most rapid.

3. The excessive and more or less continuous nasal secretion at the beginning of an acute coryza relieves the respiratory apparatus from the otherwise damaging effect of an overcharge of moisture.

4. A child's nasal mucosa and the hyperesthetic one are especially prone to suffer.

5. The "running of the nose" constitutes in part a physiological vasomotor action analogous to the profuse and more or less continuous perspiration of the outer skin, which sets in whenever air temperature and relative humidity transgresses certain limits and which forces thereby better conditions for evaporation.

6. Latent microbism becomes active on the mucosa only after these air conditions have favored its development for some time. Microbism is very rarely the primary cause of an acute coryza.

NOTE ON TWO EARLY PAPERS ON THE PATHOLOGICAL ASPECTS OF CLIMATE.

Dr. I. M. Cline, who was for over ten years professor of climatology in the University of Texas and connected during that time with the United States Weather Bureau, and now in charge of the United States Weather Bureau station in New Orleans, La., made two contributions to the climatology of Texas based on over twenty years' records of Galveston, Houston, and other places.* These papers were read before the Texas State Medical Association in 1895 and 1896 and were entitled "The Climatic Causation of Disease with a Chart Showing the Pathological Distribution of Climate in the United

[1] M. Th. Tommasina (*Comptes Rendus*, Nov. 8, 1920, p. 939-949) takes exception to the author's conclusion, which, he says, is based upon a statistical study which was not adequate, owing to the peculiarities of diseases of the respiratory organs.

*In "*The Monthly Bulletin of the Texas Weather Service*," November, 1890, to October 1891, Dr. Cline published studies on the comparison of daily mean temperature change, and departures from normal with the daily mortality from several diseases in Galveston, Tex. His data covered the years 1875-1889, inclusive. Similar studies, Dr. Clines believes, should be made in various parts of the country, thus affording a medical climatological survey which would be of great assistance to the physician in selecting the proper climate for his patient.—EDITOR.